

THE INVENTION CLAIMED IS:

1. A method of fabricating a multipole lens having a plurality of polar elements and an annular holding member, each of said polar elements having a held portion, said annular holding member being provided with radial through-holes for holding the held portions of the polar elements, said method comprising the steps of:

injecting a resin into the radial through-holes in the holding member via openings formed in the holding member, the openings being in communication with the radial through-holes; and

curing the injected resin to thereby fix the held portions of the polar elements to the holding member within the radial through-holes.

2. A method of fabricating a multipole lens having a plurality of polar elements and an annular holding member, each of said polar elements having a held portion, said annular holding member being provided with radial through-holes for holding the held portions of the polar elements, said method comprising the steps of:

inserting the held portions of the polar elements into the radial through-holes in the holding member;

preparing resin injection means in which a resin is held, the resin injection means having a discharge port;

placing the resin injection means such that the discharge port is brought into contact with the opening formed in the holding member, the opening being in communication with the radial through-holes; and

placing the holding member in a vacuum ambient together with the resin injection means while the held portions of the polar elements are inserted in the radial through-holes in order to exhaust the through-holes of gas therein,

whereby the resin is injected into the radial through-holes in the holding member and cured there.

3. A method of fabricating a multipole lens as set forth in claim 2, wherein said step of injecting the resin is carried out by increasing the pressure of said ambient after exhausting the through-holes of the gas therein.

4. A method of fabricating a multipole lens as set forth in claims 1 and 2, wherein a seal member is mounted on the opposite end of the radial through-holes in the holding member.

5. A method of fabricating a multipole lens as set forth in claims 1 and 2, wherein the injected resin is a two-component epoxy-based resin.

6. A method of fabricating a multipole lens as set forth in claims 1 and 2, wherein the multipole lens further includes an annular yoke magnetically coupled to the outer radial ends of the polar elements.

7. A multipole lens having a plurality of polar elements and an annular holding member, each of said polar elements having a held portion, said annular holding member being provided with radial through-holes in which the held portions of the polar elements are inserted, the radial through-holes being filled with a resin,

wherein the holding member is provided with openings in communication with the radial through-holes in the holding member to inject the resin into the radial through-holes.

8. A multipole lens as set forth in claim 7, wherein a sealing member is mounted on opposite radial ends of the through-holes in the holding member.

9. A multipole lens as set forth in claim 7, wherein the resin filling the radial through-holes in the holding member is a two-component epoxy-based resin.

10. A multipole lens as set forth in claim 7, further comprising an annular yoke magnetically coupled to the outer radial ends of the polar elements.

11. A charged-particle beam instrument fitted with a multipole lens, said instrument having a source of a charged-particle beam for emitting a beam of charged particles, a lens system for controlling the emitted beam to direct it at a specimen, and said multipole lens for correcting aberration in the beam,

wherein said multipole lens has plural polar elements each having a held portion, and an annular holding member provided with radial through-holes, the held portions of the polar elements being inserted in the radial through-holes filled with a resin, and

wherein said holding member is provided with openings in communication with the radial through-holes in the holding member of the multipole lens to inject the resin into the radial through-holes.

12. A charged-particle beam instrument fitted with a multipole lens as set forth in claim 11, wherein a sealing member is mounted on opposite radial ends of the radial through-holes in the holding member of the multipole lens.

13. A charged-particle beam instrument fitted with a multipole lens as set forth in claim 11, wherein the resin filling the radial through-holes in the holding member of the multipole lens is a two-component epoxy-based resin.

14. A charged-particle beam instrument fitted with a multipole lens as set forth in claim 11, wherein the multipole lens further includes an annular yoke magnetically coupled to outer radial ends of the polar elements.

15. A charged-particle beam instrument fitted with a multipole lens as set forth in claim 11, wherein the charged-particle beam is an electron beam.